Lake Erie Harmful Algal Bloom Bulletin

09 July, 2018, Bulletin 06

Analysis

The *Microcystis* cyanobacteria bloom continues in the western basin. Recent satellite imagery (7/8) indicates the bloom is still present along the Michigan and Ohio coasts near Maumee Bay, extending 22 miles offshore the Michigan coast, east of West Sister Island. Observed winds over the weekend (7/6-8) caused mixing of *Microcystis*, reducing surface concentrations from earlier. Measured toxin concentrations are below recreational thresholds throughout most of the bloom extent, but concentrations can exceed the threshold in the western extent of the bloom where it is most dense (appearing green from a boat). *Keep pets and yourself out of the water in areas where scum is forming*. The cyanobacteria bloom in Sandusky Bay persists, spilling out of the bay and east along the Ohio coast. A cyanobacteria bloom caused by *Dolichospermum* continues in the central basin, though surface concentrations have reduced since last week. This bloom is different from the western basin bloom, and in past years has lasted only a few weeks.

Forecasts

Forecast winds (6-11 kn) today through Tuesday (7/9-10) may promote scum formation in surface waters. There is a potential for eastward transport of surface *Microcystis* concentrations today through Thursday (7/9-7/12). –Davis, Urízar

Additonal Resources

To find a safe place for recreation, visit the Ohio DOH "BeachGuard" site: http://publicapps.odh.ohio.gov/beachguardpublic/
Ohio EPA's site on harmful algal blooms: http://epa.ohio.gov/HAB-Algae
NOAA's GLERL provides additional HAB data here: http://www.glerl.noaa.gov/res/HABs_and_Hypoxia

The images below are "GeoPDF". Please visit https://go.usa.gov/xReTC for instructions on viewing longitude and latitude.

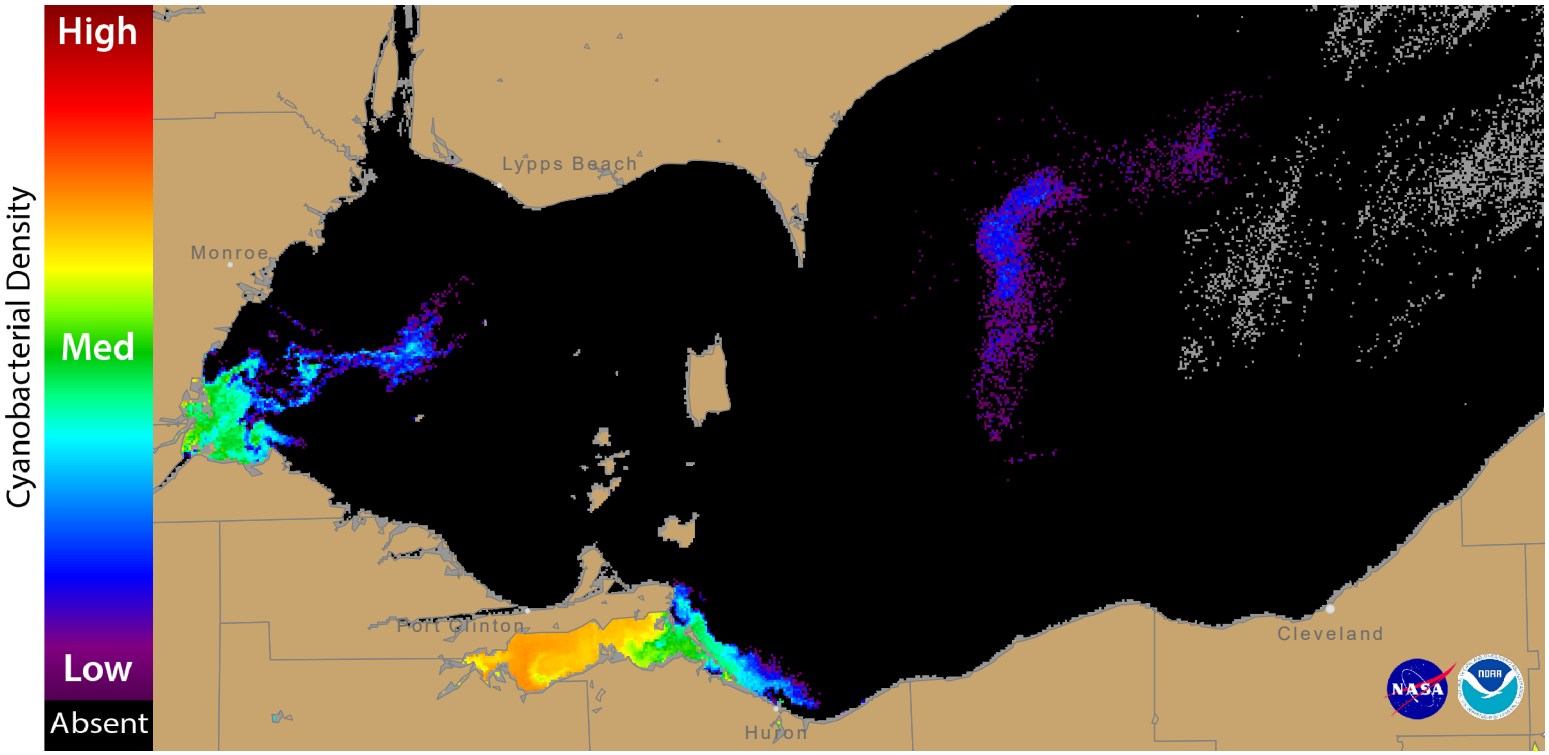


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 08 July, 2018 at 12:04 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/ml

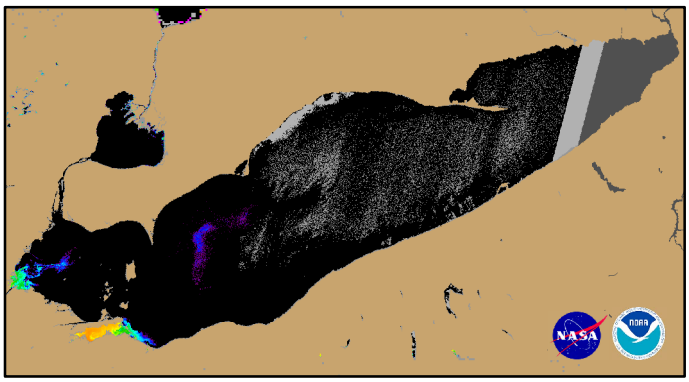
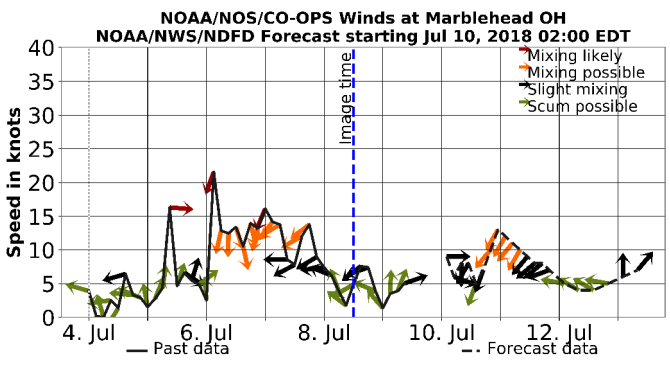


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 08 July, 2018 at 12:04.



Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: https://tidesandcurrents.noaa.gov/hab/lakeerie.html

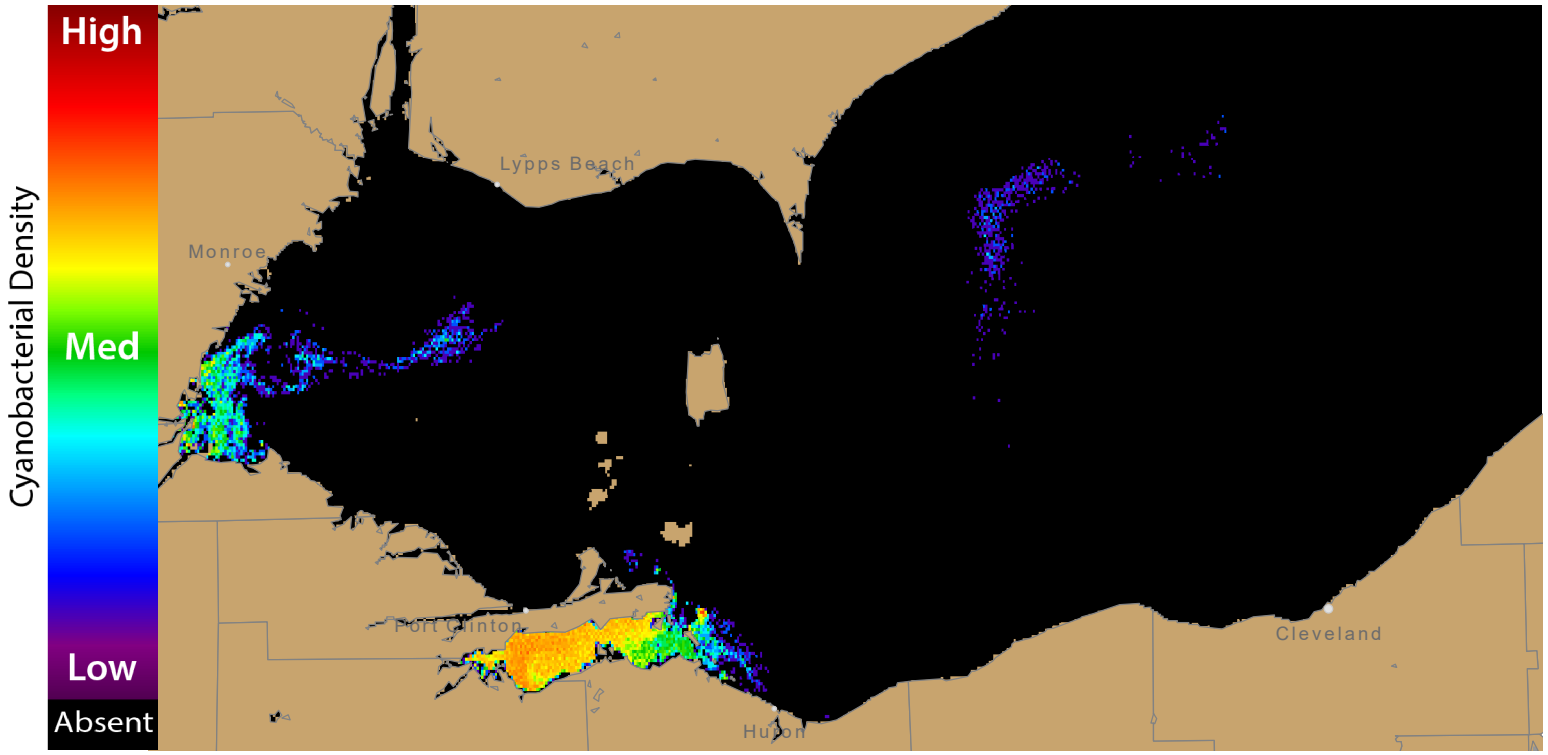


Figure 3. Nowcast position of bloom for 09 July, 2018 using GLFS modelled currents to move the bloom from the 08 July, 2018 image.

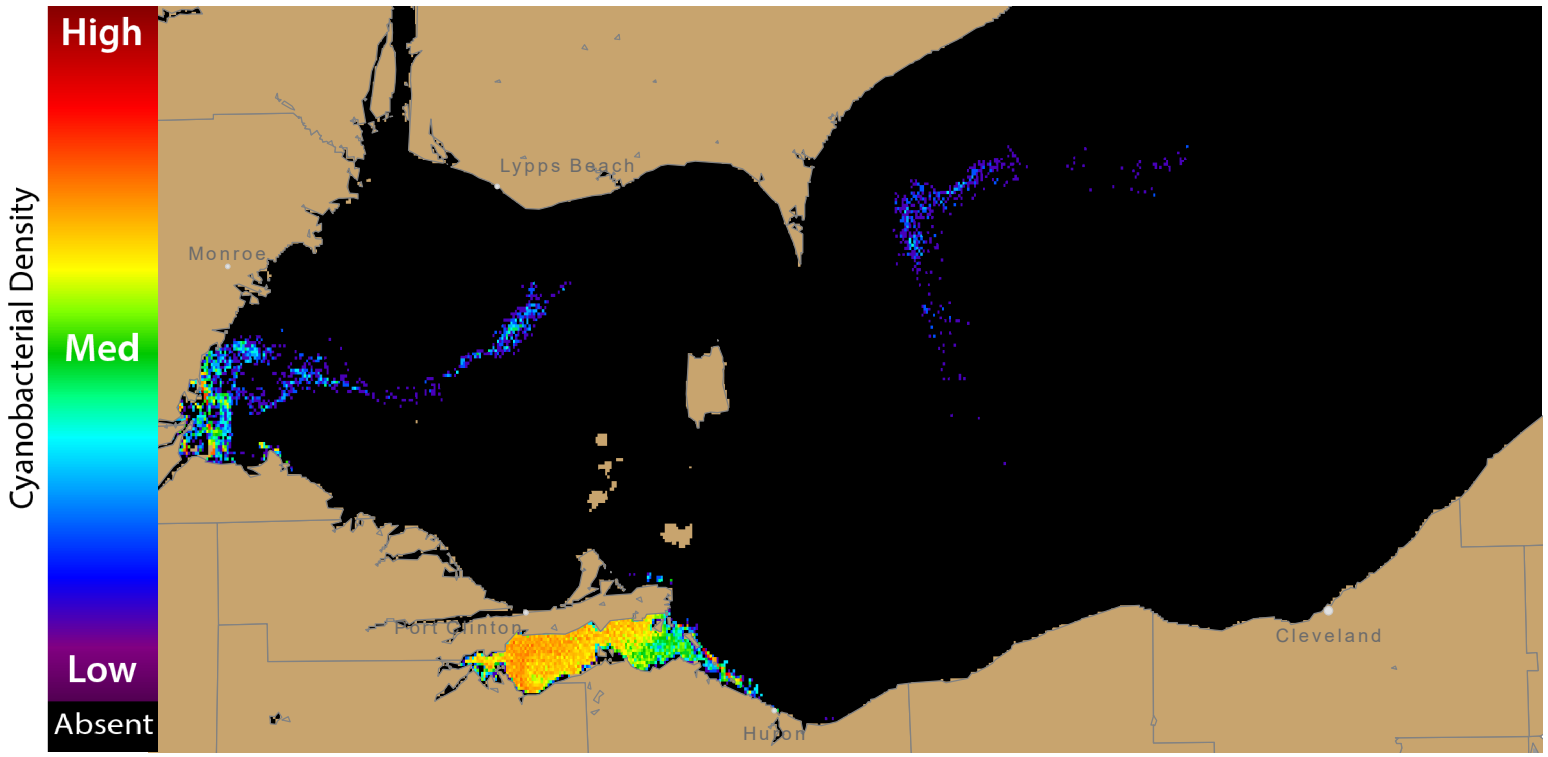
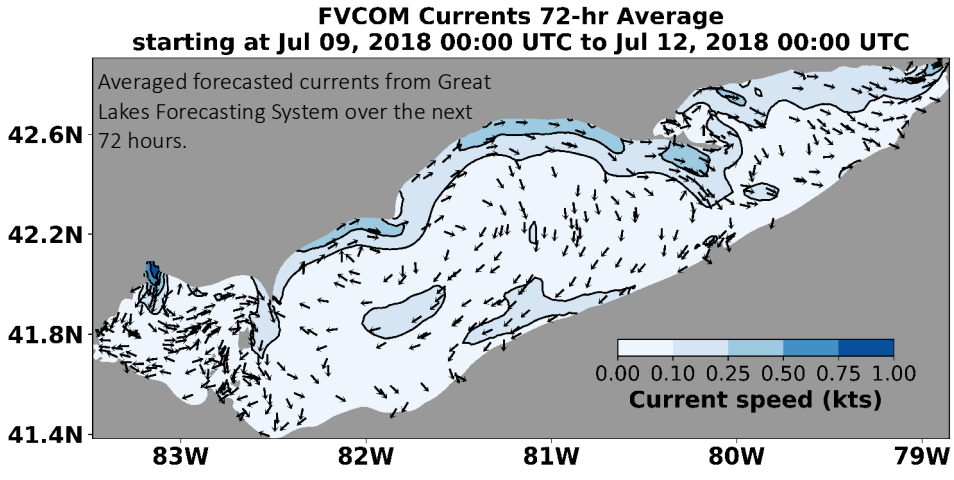


Figure 4. Forecast position of bloom for 12 July, 2018 using GLFS modelled currents to move the bloom from the 08 July, 2018 image.



For more information and to subscribe, please visit the NOAA HAB Forecast page: https://tidesandcurrents.noaa.gov/hab/lakeerie.html